Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Germination of teleutospores.—In order to throw some light on the parallelism between the time period during which teleutospores are capable of germination and that during which their host plants can be infected, DIETEL[20] has, in a general way, studied some of the factors influencing the germination of teleutospores of *Melampsora.* Early in March the teleutospores of *Melampsora Larici-Caprearum* Kleb. germinate in about three days when brought into a higher temperature. The time required for germination decreases as the season progresses. Whether the shortening of the period required for germination was due to temperature changes or to a kind of after-ripening of the spores independent of the temperature was not determined. Temporary drying hastened germination. Temporary freezing did not retard the process. Strong light delayed germination. Germination takes place at temperatures as low as 6° C., and only in the neighborhood of this low point was any influence of temperature observed. Experiments with *M. Tremulae* seemed to indicate that germination in this form is less influenced by drying than in *M. Larici-Caprearum.* Germination takes place at temperatures of 6°–10° C., but proceeds more rapidly at 15°–20° C.—H. HASSELBRING.

Seedling structure in Leguminosae.—COMPTON[21] has made a notable contribution to our knowledge of seedling structure. He has examined 201 species of Leguminosae, ranging through all the regions of that vast family. The three parts of the paper present the detailed descriptions, the summarized information, and the general discussion. Under the last head the following topics are considered: the nature of the hypocotyl, hypogeal and epigeal germination, the epicotyl in the Vicieae, the level of the transition, the level of transition and the mature habit, the level of transition and phylogeny, the type of symmetry, plumular traces in hypocotyl and root, tetrarchy, reduction of the number of protoxylems, triarchy, other types of symmetry, the relationships of the types of symmetry, the size of the seedling, the primitive habit. It is obvious that in so extensive a work no outline of the results can be given, and we commend those interested to the 14 conclusions stated by the author. The closing sentence is significant: "To a limited extent, therefore, characters of seedling structure may be of diagnostic value; but it is exceedingly risky to apply them to solve the broader problems of phylogeny."—J. M. C.

Effect of tarred roads on vegetation.—With the extension of the use of gas-tar, petroleum, and bituminous substances for surfacing roads, especially in public parks, the question of injury to plants by these substances becomes one of importance. While many experiments have shown that plants are easily damaged by the fumes of tar and similar substances, such experiments have as a rule been conducted from a laboratory standpoint, and have left unanswered the question of the slow action of these substances under natural conditions. From a study of the effects resulting to vegetation along the tarred roads in some of the parks of Paris, GATIN[22] finds that considerable damage is done to trees and other plants by the tar-laden dust particles; accordingly the injury is less severe along the less frequented roads. A peculiarity of the injury is that it develops very gradually, and in case of the trees did not appear until the practice of surfacing the roads with tar had been continued for two years. Dust collected from tarred roads and dusted at frequent intervals on nursery stock produced characteristic injury, consisting of spotting and browning of the leaves and retardation of growth.—H. HASSELBRING.

---

[20] DIETEL, P., Versuche über die Keimungsbedingungen der Teleutosporen einiger Uredineen. Centralbl. Bakt. II. **31**:95–106. 1911.

[21] COMPTON, R. H., An investigation of the seedling structure in the Leguminosae. Linn. Soc. Jour. Bot. **41**:1–122. *pls. 1–9.* 1912.

Cystidia as hydathodes.—As a result of a critical examination of the cystidia occurring in the hymenium and similar cystidia-like trichomes often found distributed over other surfaces of the fruit bodies of Hymenomycetes, KNOLL[23] concludes that, with the exception of certain special types like the large cystidia of some species of *Coprinus*, these two sets of trichomes belong in a physiological-anatomical sense to the same category of organs, and that they function exclusively as hydathodes. KNOLL finds that the exudation of water is restricted to a definite region, with few exceptions, situated at the apex of the trichome. The cell wall at this point is capable of swelling to such an extent that it forms a colloidal solution in the excreted water. That the drops adhering to the ends of the hydathodes consist of a colloidal solution is shown by the gelatinous residue left when the drops are allowed to evaporate on a glass slide, and also by the fact that a membrane is precipitated when the cystidium with the attached drop is immersed in alcohol. Crystals are often deposited on the ends of the hydathodes as a result of evaporation of the liquid. —H. HASSELBRING.

Plant diseases of Texas.—A survey of the plant diseases occurring within a radius of 100 miles of San Antonio, Texas, has been published by HEALD and WOLF.[24] The paper is based on collections made by the writers during a period of about two years, from 1908 to 1910. It comprises a list of fungi collected on about 200 species of hosts within the region examined, together with brief descriptions of the fungi and notes on the effects produced on the hosts. A number of well executed plates accompany the text; however, the motive that

---

[22] GATIN, C. L., Die gegen die Abnutzung und den Staub der Strassen angewendeten Verfahren und ihre Wirkung auf die Vegetation. Zeitschr. Pflanzenkrank. **22**:193–204. 1912.

[23] KNOLL, F., Untersuchungen über den Bau und die Funktion der Cystidien und verwandter Organe. Jahrb. Wiss. Bot. **50**:453–501. *figs. 69.* 1912.

[24] HEALD, F. D., and WOLF, F. A., A plant disease survey in the vicinity of San Antonio, Texas. Bur. Plant Ind. Bull. 226. pp. 112. *figs. 2. pls. 19.* 1912.